



U.S. Department
of Transportation
Federal Transit
Administration

Memorandum

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Subject: Approval of Entry into Preliminary Engineering:
High-Capacity Corridor Transit Project in Honolulu, HI

Date:

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From: The New Starts Team for Honolulu
HQ and TRO-09

Reply to
Attn. of:

Field Code Changed

To: Leslie T. Rogers
Regional Administrator, TRO-09

Susan Borinsky
Associate Administrator for Planning and Environment, TPE-1

Susan Schruth
Associate Administrator for Program Management, TPM-1

Request

The Department of Transportation Services of the City and County of Honolulu (City) has submitted a request for approval to advance the Honolulu High-Capacity Transit Corridor Project (the project) into preliminary engineering. This memorandum seeks approval of that request.

The New Starts Team for the Honolulu project recommends approval of the request because the project has met all requirements for entry into preliminary engineering: the project has received a *Medium* rating against the New Starts criteria; the project sponsor has demonstrated the technical capacity to undertake the project; and the project has been adopted into the Oahu Metropolitan Planning Organization's financially constrained long-range transportation plan.

The City submitted an initial PE request on May 5, 2009. On August 4, FTA directed the City to revise the cost estimate and financial plan submitted by adding \$116 million per [the](#) recommendation from the project management oversight contractor (PMOC). The City submitted a revised plan on [August 13 at which time FTA determined the application to be completed](#) and FTA's financial management oversight contractor (FMOC) completed the review of the plan on [September 2](#).

Comment [E1]: Below you list the date as August 12. Please confirm which date is correct.

Project Description

The project is an approximately 20 mile double-track rail line serving the south shore of Oahu from a western terminus in Kapolei, past Pearl Harbor and Honolulu International Airport, through downtown Honolulu to an eastern terminus at Ala Moana Center. The project includes 21 stations; four park-and-ride facilities with 4,100 total spaces; approximately 76 rail vehicles initially (with nine more vehicles purchased in 2024/25); and a facility for vehicle storage, vehicle maintenance, and system operations. The electrified (third rail) line will be almost entirely on elevated structure in existing public rights of

way – primarily arterial streets. Rail service will extend over 20 hours each day with automated trains running every three minutes in the weekday peak periods and six minutes during most off-peak hours.

The total expected FFGA project cost including finance charges is \$5,348 million in YOE dollars. The City is seeking \$1,550 million in Section 5309 New Starts funds (29 percent).

Project Purpose

The project corridor is on the south shore of Oahu and is the location of approximately 550,000 residents and 400,000 jobs. The corridor includes, from west to east, the rapidly growing areas of Kapolei/Ewa, the Pearl Harbor/HNL international airport, downtown Honolulu, Ala Moana Center, the University of Hawaii (UH) at Mānoa, and Waikīkī. The corridor is geographically constrained by the ocean to the south and two mountain ranges to the north. Pearl Harbor reaches well inland from the ocean and pinches the already-narrow corridor near its mid-point. Because most employment in the corridor – and on the island – is located in the urban core extending from Pearl Harbor on the west to Waikīkī and UH on the east, large numbers of commute trips travel eastbound into the core in the morning and westbound in the evening.

Highway travel is carried by the H-1 freeway that extends through the length of the corridor. H-1 carries the large majority of the longer automobile trips in the corridor because of the general absence of parallel highways and major arterials. Near Pearl Harbor, H-1 traffic is joined by traffic from H-2 – a freeway extending north into Central Oahu between the two mountain ranges. Consequently, H-1 is heavily congested through much of the day, seven days per week, despite the presence of HOV lanes in the western-most segment of the corridor and a reversible lane in the vicinity of Pearl Harbor.

The Honolulu bus system provides high quality service throughout the corridor and carries 185,000 linked trips per average weekday. Per-capita ridership is among the top 20 in the country, reflecting heavy traffic congestion, high parking costs in the urban core, and aggressive efforts by the city to improve service with express buses on HOV lanes; ~~some of the earliest bus rapid transit services in the country~~; and relatively low fares. Service quality suffers substantially from mixed-traffic operations, however, and increasing traffic congestion degrades schedule reliability, increases operating costs, and exacerbates the bus-capacity limitations on the highest-ridership bus routes. Average door-to-door travel time from the western part of the corridor to downtown Honolulu is currently 95 minutes.

By 2030, the corridor is projected to have 760,000 residents and 525,000 jobs, capturing most of the population growth and effectively all of the employment growth anticipated for Oahu for the next two decades. Some 40 percent of growth within the corridor is projected for Kapolei/Ewa where, by City policy, a secondary urban center is expected to emerge. Increasing traffic volumes are projected to make highway congestion marginally worse despite \$3 billion worth of highway improvements in the corridor. Demographic growth is expected to increase bus ridership to 225,000 daily linked trips but the performance of the bus system is expected to continue to degrade because of increasing congestion – with even longer travel times, less reliable service headways, increasing capacity problems, and still-higher operating costs to maintain the same headways. Average travel time from the western part of the corridor to downtown Honolulu is expected to increase to 99 minutes.

The baseline alternative adds more express bus routes, increases the frequency of limited-stop routes, and takes advantage of a new HOV facility connecting existing HOV lanes in the corridor to the west edge of downtown Honolulu. The baseline also increases the number of community circulator routes

Comment [E2]: How many people actually make this trip? By western part of the corridor do you mean the most western part? You don't describe where people live in the paragraphs above, only where the jobs are located and that people travel eastward to the jobs.

serving the rapidly growing western parts of the corridor. As a result, ridership is projected to increase to 234,000 linked trips per day, average bus time from the western part of the corridor to downtown is estimated to decrease to 94 minutes, and bus riders are predicted to save 3.2 million hours of travel time annually. These marginal improvements reflect two fundamental limitations on low-cost attempts to improve service: first, the bus system already includes most of the useful low-cost improvements that are possible in the corridor; and second, most bus services in the corridor will continue to operate in heavily congested mixed traffic.

The project introduces a fully grade-separate guideway for trains providing frequent, much-higher-speed transit service. The rail line is projected to carry 116,000 daily trips and increase total transit ridership to 283,000 daily linked trips. The project will reduce average transit travel times between the western part of the corridor and downtown to 65 minutes – 29 minutes faster than the baseline alternative – and will save transit riders a total of 21 million hours per year by 2030. Substantial improvements in schedule reliability represent additional benefits not counted in these estimates of time savings.

Comment [E3]: How so? Isn't reliability captured by the mode constant? Please better describe or remove this sentence.

Planning History

The project has emerged from a planning process that conforms to FTA New Starts requirements and reflects the ongoing tensions between the project-advocate role of the City administration, the narrowly divided City Council, and the divergent views of the public. The documents, decisions, and other milestones that comprise the project's history are the legacy of those tensions:

- December 7, 2005: FTA publishes a Notice of Intent (NOI) in the Federal Register for a combined alternatives analysis and Draft Environmental Impact Statement (AA/DEIS) considering major highway and transit options for the High Capacity Transit Corridor.
- November 1, 2006: The City completes the alternatives analysis having decided, in collaboration with FTA, to defer the DEIS in deference to the local schedule for selection of a locally preferred alternative.
- December 22, 2006: The City selects an LPA that is “fixed guideway transit” with a length of approximately 34 miles extending from West Oahu, along Salt Lake Boulevard or through Honolulu International Airport, through downtown, and branching to two eastern termini in Waikīkī and on the Mānoa campus of the University of Hawaii.
- ~~Two months later (on February 27, 2007);~~ ⁴ The City identifies a 20-mile “first project” within the LPA, extending from the west in Kapolei, via Salt Lake Boulevard, to Ala Moana Center just east of downtown.
- March 15, 2007: FTA publishes in the Federal Register a Notice of Intent (NOI) to undertake an environmental review of the “first project,” including alignment options on Salt Lake Boulevard and through Honolulu International Airport.
- May 4, 2007: The Oahu Metropolitan Planning Organization amends the Oahu Regional Transportation Plan to include fixed guideway transit from East Kapolei to Ala Moana Center.
- April 17, 2008: The City chooses steel wheel on steel rail as the transit technology.
- February 11, 2009: The City completes the DEIS and chooses the airport alignment option.
- May 4, 2009: The City submits an initial request to FTA to advance the project into PE.
- August 12, 2009: With receipt of the revised financial plan, FTA deems the PE application complete.

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Comment [E4]: Please reword. Give date DEIS published, and then give date airport alt selected as LPA.

Comment [E5]: Above you list the date as August 13. Please confirm which date is correct.

Two other key milestones for the project were the January, 2005, initiation of tax revenue collections dedicated to the project and the November, 2008, voter referendum agreeing to the City's intention to construct a rail transit line in the corridor.

Comment [E6]: Is there some other way to describe this referendum. This "agreement" language seems awkward to me.

National Environmental Policy Act (NEPA) Schedule

A NOI was published in March 2007. The Draft EIS was published on [REDACTED]. In July 2009, the City submitted to FTA an administrative draft of the Final Environmental Impact Statement (FEIS) to FTA. FTA has transmitted an initial set of comments to the City on the administrative draft, which the City and is currently addressing preparing final comments. The City's schedule calls for publication of the Final EIS very soon after as soon as the project is approved into PE and receipt of for a Record of Decision in November 2009, which is unlikely for the reason enumerated below.

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The City's schedule on the FEIS has been impacted by protracted meetings on historic and cultural issues. In an unusual step, the Advisory Council for Historic Preservation has weighed in on the development of a Programmatic Agreement (PA), which needs to be finalized prior to the release of the FEIS. Also, since the Department of Transportation Services for the City and County of Honolulu does not have the necessary authority to bind the City to commitments identified in the PA, the City will need to go back to the City Council for this authority. FTA does not expect to issue the FEIS until late fall at the earliest.

Project Cost and Capital Funding

The City estimates that the project will cost \$5.35 billion (YOE) with category-specific costs as follows:

Standard Cost Category	Category Description	Estimated Capital Cost (\$ millions, YOE)
10	Guideway and Trackwork	\$1,667.8
20	Stations, Stops, Terminals	\$389.2
30	Support Facilities	\$138.5
40	Site work/Special Conditions	\$895.5
50	Systems	\$311.2
60	ROW, Land, Improvements	\$128.6
70	Vehicles	\$398.8
80	Professional Services	\$933.6
90	Contingency	\$184.2
100	Finance Charges	\$290.3
--	Total	\$5,347.7

The project sponsor is seeking \$1.55 billion (YOE) in New Starts funds (29 percent). The two non-New-Starts sources of capital funds are a 15-year (2007 through 2022) dedicated increment in the general excise tax on Oahu (\$3.79 billion including the current cash balance and interest) and FTA Section 5307 formula funds (\$305 million).

However, in late August, 2009, the City opened bids for construction of elements of the westernmost six miles of the project. While contract negotiations continue, initial reports from the City are that the bids are lower than their engineer's estimates by 10 to 25 percent. The City had anticipated that the weak economy would produce lower-than-estimated bids, similar to those observed for public works projects elsewhere. As a result, the City may revise the full-project cost estimate and the financial plan soon after PE approval.

Assessment of Project Scope, Schedule, Cost, and Technical Capacity

In March 2007, in anticipation of a PE request from the City later that year, FTA assigned Booz Allen Hamilton (BAH) as the Project Management Oversight Contractor for the Honolulu project. BAH has reviewed the several iterations of the City's Project Management Plan (PMP) beginning with its initial draft in June 2007. Continuing local decisionmaking and consequent changes to the project caused the City to defer its request for entry into PE. Consequently, the PMOC review effort eventually included several iterations of PMOC comments, responses from the City, and revisions to the PMP. BAH completed its review of the final March 2009 PMP in July 2009. In addition, the PMOC also performed a detailed review of the City's technical capacity and capability and completed its review in July 2009.

The BAH review of the City's technical capacity and capability, ~~which was based on the overall assessment of the required documents listed in the PE checklist,~~ concluded that the City has demonstrated its technical capacity and capability to effectively manage the PE phase of project development. Review comments by BAH focused on updates of elements ~~some~~ of the required plans that are routine adjustments made as development of the project proceeds. These items are included in FTA's checklist for entry into final design and, consequently, are not enumerated here.

In August 2008, FTA assigned Jacobs Engineering to review ~~the~~ project delivery method, ~~scope,~~ schedule, cost and schedule contingencies, and cost estimate, and assess the project cost and schedule risks in anticipation of FTA's need for this information in the New Starts evaluation and rating of the project to support the decision on entry to PE. This review also included several iterations of PMOC comments, responses from the City, and revisions of both the PMOC comments and the cost estimate. Jacobs completed the cost review in July 2009.

The Jacobs review ~~of the capital cost estimate~~ concluded that the ~~\$5.35 billion~~ cost estimate ~~would be is an acceptable basis for FTA evaluation of the project. This conclusion was acceptable~~ conditioned on the City's addition of \$116 million to the ~~prior~~ estimate, ~~bringing the total cost up to \$5.35 billion –~~ primarily to cover a higher escalation rate anticipated by the PMOC ~~than had been assumed by the City.~~ Final adjustments recommended by the PMOC for individual line items in the cost estimate were minor. The Jacobs review of the project schedule concluded that the City should add five months to the projected date of revenue operation for the full project in 2019 (i.e from the City's planned date of March 2019 to the PMOC's estimated dated of August 2019). The City ~~has made these~~ adjustments.

New Starts Rating

The project earns an overall project rating of *Medium* against the New Starts criteria. This overall rating is based on a *Medium* rating for project justification rating and a *Medium* rating for local financial commitment rating. Detailed component ratings are:

Project Justification	Local Financial Commitment
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Comment [E7]: This section of the PE approval memo needs to document areas identified by the PMOC that must be addressed during PE similar to what is listed in the PE approval letter (FAA/airport issue, etc.) Please insert. The letter should not include information that must be addressed by the project sponsor unless it has also been included in the memo.

Also, this section does not follow the draft approval memo guidance which asks for key information separated by scope, schedule, cost, and technical capacity.

Comment [E8]: Is there any reason to mention why it is a different PMOC? Was it simply a contract expiration or money running out thing? If this is requested under FOIA, folks might wonder.

Comment [E9]: Please follow the format in the draft approval memo guidance. This does not include some of the information outlined in the draft guidance as belonging in this section.

Mobility	High	Capital Funding Plan	Medium
Land Use	Medium	O&M Funding Plan	Medium
Economic Development	Med-High	Non-New Starts Share	High
Operating Efficiency	Medium		
Environment	Medium		
Cost Effectiveness	Medium		
Overall	Medium	Overall	Medium

The cost-effectiveness index is \$18 per hour of ~~mobility benefits to transit users~~ travel time savings.

Comment [E10]: Please give full value including cents as this is the document of record for us.

Other Issues and Concerns

The City is highly focused on a groundbreaking before the end of calendar year 2009 to fulfill early promises on project schedule and to deter the State legislature (that convenes in January) from diverting funds from the rail-dedicated tax revenue stream to meet shortfalls in the State budget. To achieve this milestone objective, the City anticipates circulation of the FEIS shortly after PE approval and completion by FTA receipt of a Record of Decision (ROD) shortly after the FEIS circulation period concludes. With environmental clearance of the project, the City hopes to receive approval from FTA through a Letter of No Prejudice plans to break ground on the westernmost 6-mile segment sometime in December. This schedule appears unlikely due to the delay of the FEIS for the reasons enumerated in the NEPA section of this document.

Comment [E11]: The paragraph below about the LONP that I deleted has language in it that makes me question the City's intentions. Does the City somehow believe they do not need an LONP for construction of the western segment even though they want to count it as match? The sentence below only mentioned an LONP for vehicles and other system elements such as the maint facility, not the construction of guideway. Also, please note that you should mention to the City that our policy guidance published Sept 2 significantly expanded pre-award authority. Grantees now have pre-award authority after complete of NEPA to purchase vehicles so that an LONP is not necessary.

The City's schedule on the FEIS has been impacted by protracted meetings on historic and cultural issues. In an unusual step, the Advisory Council for Historic Preservation has weighed in on the development of a Programmatic Agreement (PA), which needs to be finalized prior to the release of the FEIS. Also, since the Department of Transportation Services for the City and County of Honolulu does not have the necessary authority to bind the City to commitments identified in the PA, the City will need to go back to the City Council for this authority. We do not expect to issue the FEIS until late fall at the earliest.

The City's also plans, soon after PE approval and FTA's Record of Decision, to seek a Letter of No Prejudice (LONP) from FTA to cover components of the initial 6-mile segment that are system-wide in nature (vehicles, signals, communications, the maintenance and storage facility). FTA has traditionally issued LONPs only for projects in Final Design and only for compelling near-term reasons. Consequently, FTA may have difficulty in meeting the City's expectations with respect to an early LONP approval related to the initial segment.

Finally, while the City already has in place a dedicated funding source for the project's capital costs, project costs have reached a point where they exceed the projected capacity of that source. Further, so far collections have so far, under run projections made before the current economic downturn. As a consequence, the City's current financial plan has had to include an amount of New Starts funding that exceeds FTA's track record for projects outside of the New York metro area (a large amount in dollar terms; the share remains less than 30 percent). The plan also calls for the use of FTA Section 5307 formula funds for nearly a decade to cover remaining capital costs. A look-ahead by FTA's financial contractor suggests that these difficulties may cause the financial plan to fail the financial stress tests that will be applied when the City requests entry into final design. Remedies for these difficulties may include a lower cost estimate resulting from the lower-than-estimated bid submissions in August and/or an extension of the 15-year period of the excise tax increment dedicated to the rail project. In any case,

Comment [E12]: Do we really need to mention this since we agreed to the NS share. In other letters we have only mentioned if the NS dollar amount is a problem. Why call out something as an issue if we have agreed to it?

Comment [E13]: I'm not sure we should be suggesting an extension to the tax unless the City offered that as a possibility. If not, then we should reword simply to say "and/or identification of additional revenue sources."

financial questions may pose difficulties sufficient to put at risk the City's anticipated initiation of final design in early 2010. An early warning of this risk has been included in the PE approval letter.

Conclusion

The New Starts Team has evaluated [the](#) Honolulu High-Capacity Corridor Transit Project against the New Starts PE readiness criteria and has concluded that all requirements have been met. The team requests concurrence on its recommendation to approve the project into PE. The PE approval letter (attached) advises the City and County of Honolulu of conditions for advancing the project through PE and into final design.

Concur: _____
Leslie T. Rogers
Regional Administrator, TRO-09
Date _____

Concur: _____
Susan Borinsky
Associate Administrator for Planning and Environment, TPE-1
Date _____

Concur: _____
Susan E. Schruth
Associate Administrator for Program Management, TPM-1
Date _____

Attachment: PE Approval Letter
[10 day congressional notification](#)
[PMOC report](#)